DOCUMENT RESUME

ED 459 135 SO 033 439

AUTHOR Fretwell, David H.; Wheeler, Antony
TITLE Russia: Secondary Education and Training. Secondary Education Series.
INSTITUTION World Bank, Washington, DC. Human Development Network.
REPORT NO Ser-22859
PUB DATE 2001-08-00
NOTE 17p.; For other papers in this series, see SO 033 435-441.
AVAILABLE FROM Education Advisory Service, Human Development Network, The World Bank, 1818 H Street, NW, Washington, DC 20433-0002. Tel: 202-477-1234; Fax: 202-477-6391; e-mail: eservice@worldbank.org. For full text: http://www1.worldbank.org/education/secondary/.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cultural Context; Developing Nations; *Educational Change; *Educational Policy; *Educational Practices; Educational Research; Foreign Countries; *Secondary Education; *Training
IDENTIFIERS Educational Issues; *Russia; World Bank

ABSTRACT

The World Bank has been assisting the efforts of developing countries to reform secondary education systems for more than 35 years. During this period, the context and imperatives for education reform have changed considerably due to various factors such as globalization of the world economy and the impact of new technologies. This paper is one of a series which addresses a wide range of topics within secondary education that reflect current challenges. The paper, a country case study, discusses the experiences of Russia in developing secondary education. The paper explores the complexity of Russia's secondary education and training systems and the correspondingly difficult choices that the government faces in reforming them. The paper is divided into the following sections: "Country Context"; "Development of Secondary Education and Training"; "Quality and Learning"; "Equity"; "Management and Institutional Development"; "Innovations"; "Bank Support to the Country"; and "Issues." Annexed are data giving the percentage share of students in secondary education for the countries of Eastern Europe and Central Asia. (BT)

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ED 459 135

SECONDARY EDUCATION SERIES

22859
August 2001

RUSSIA: SECONDARY EDUCATION AND TRAINING

David H. Fretwell
Antony Wheeler

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EDUCATION
THE WORLD BANK

World Bank, Human Development Network
Secondary Education Series

Russia
Secondary Education and Training

David H. Fretwell
The World Bank

Antony Wheeler
Education Consultant

The World Bank
Washington, D. C.

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Washington, DC 20433

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First printing 2001

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Foreword

Welcome to the Secondary Education Series of the Human Development Network, Education Group at the World Bank.

The World Bank has been assisting developing countries in their efforts to reform their secondary education systems for more than 35 years. During this period, the context and imperatives for education reform have changed considerably due to various factors such as globalization of the world economy and the impact of new technologies. This new environment requires rethinking the traditional way of providing secondary education and training systems and both industrializing and industrialized countries are grappling how best to prepare their youth to become productive workforce as well as responsible citizens. Thus, this series will address a wide range of topics within secondary education that reflect the challenges that we are facing now.

The publications in this Secondary Education Series might broadly be considered to fall into two categories, though there are clearly overlaps: those papers addressing policy issues and those describing in more detail particular countries' experiences. This paper, "Russia - Secondary Education and Training", is in this second category. The intention behind these country case studies is to expose the complexity of secondary education and training systems and the correspondingly difficult choices that governments face in reforming them. It is only through a clearer understanding of what is happening in particular countries that fruitful discussion and analysis, and further research, can take place. We hope that these case studies stimulate debate. We welcome your comments.

World Bank
Human Development Network
Education Group
March 2001

Country Context

The size and diversity of Russia, reinforced by increasing decentralization of government, means that any observations about secondary education development are to some extent generalizations to which exceptions can readily be found in particular areas of the country. Moreover, many types of data on vocational education – e.g., graduate employment trends, unit expenditures – are seriously deficient.

Given the extent of its territory, the extreme climate and dispersed population, the federal structure of government, and the ongoing and painful transition from a planned to a market economy with attendant severe financial stringency, Russia faces a particularly difficult task in adapting and updating its secondary education and training system to meet emerging needs. Further factors which have also complicated effective educational provision locally include significant population movements out of remote areas, immigration of ethnic Russians from other FSU countries, and the failure or significant decline of many enterprises which previously provided employment for secondary education graduates.

In particular the breakdown of public revenue collection in many areas has meant that even the most basic recurrent educational expenditures such as salaries could not be met in a timely fashion, and any maintenance or replacement of obsolete equipment, not to mention innovative capital expenditure, was out of the question. This has frequently resulted in a situation where the survival of vocational training institutions and their teaching personnel has necessitated concentration on income-generating activities to the detriment of normal educational provision, in the process often using pupils as unpaid or at best underpaid workers. However, this has sometimes had an unintended benefit of exposing both staff and pupils to the needs for flexibility and adaptability inherent in serving the evolving needs of a market economy.

Development of Secondary Education and Training

Under Communism, the Soviet Union, and Russia in particular, developed a comprehensive system of secondary education and training, with relatively greater emphasis on the technical and vocational streams than has historically been the case in most Western environments. At the secondary level from grade 10 onward there are the academic secondary stream and two types of vocational/technical/professional education; (a) initial shorter duration professional-technical institutions (known as PTUs) which typically have two-year courses, and (b) specialized secondary institutions (SSIs) whose courses usually last three years (these were not considered part of "secondary education" although they provided services for students at the secondary school age level).

Current general trends indicate a real decline in numbers attending PTUs, a large increase in the number of lycea and gymnasia, and a move away from the more technical versions of the elite secondary schools. In 1996, enrollments were 3.9 million in the academic stream, 1.7 million in PTUs, and 2.0 million in SSIs, which represented minimal change from 1990 in the academic stream, but declines of 11% in PTUs and 13% in SSIs over the same period. Overall, upper secondary education enrolled 59% of the 15-17 age group in 1996, down from 63% in 1990. Declining cohort size is a factor in enrollment declines in some regions due to migratory

movements, but more important overall has been the declining availability of scholarships for poorer students, combined with an increased economic need to seek early employment, and the decline in training opportunities through state enterprises. The student-teacher ratio in PTUs has been static around 11:1 during the 1990s, but no parallel statistic is available for SSIs. The total number of PTUs declined from 4,328 in 1990 to 4,114 in 1996, while the number of SSIs remained almost constant around 2,600. Teachers in PTUs have declined in line with the number of institutions, but there has been no trend of more intensive use of teachers, and their salaries have remained low, and often in arrears. Thus the system has been characterized by continuing low costs and low productivity. There are very few private vocational institutions in Russia, and their enrollment is tending to decline, so that this is not a significant component of the sector.

Communist-era institutions differed from Western counterparts in several significant respects: (a) lower-level vocational institutions were typically linked to production enterprises which subsequently provided jobs for graduating students; (b) this contributed to the creation of a multiplicity of small institutions, whose teaching staff were relatively lightly loaded; (c) since public institutions were expected to serve multiple social objectives, e.g. a school might have its own dental staff, a practice of extensive non-teaching staffing grew up; (d) the financing and management of education were highly centralized. These characteristics form part of the heritage which influences the contemporary problems faced by secondary education and training in Russia.

Quality and Learning

The idea of quality under the Communist education and training system differed significantly from Western conceptions. Many secondary institutions were directly linked to production enterprises, and had a job-oriented rather than a occupationally-oriented vocation, learning achievement and quality of instruction were similarly constrained by enterprise needs. So long as enterprises remained unmodernized, there was also no need to update or modify training in the attached training institution, which tended to be centered on rote learning. In the longer-cycle SSIs, which were directly responsible to the federal education authorities, determination of the quality of learning and standards of performance were constrained by the lack of any national system of assessment, however there was a highly centralized system of content delivery with built-in control mechanisms. Pupils were tested directly by their teachers, whose evaluation of performance was thus the only one available – there was no national system of independent evaluation.

Soviet and subsequently Russian education has been focussed on the accumulation of knowledge, in which aim it has been relatively successful, as measured by results in international competitions, but most courses do not encourage problem-solving, innovative thinking and creativity (in general terms the constructive use of knowledge, as opposed to its mere accumulation). However, the debate on national and flexible regional standards has been very intense in Russia throughout the 1990's, and work is underway in 2000, with the support of the Bank's first Education Innovation Project. The Government is introducing a new 12-year secondary school cycle. Initial work started in 1992 on the development of assessment and testing systems tended to define standards in terms of inputs to the learning process, rather than

the focus on student outcomes which is needed by potential employers seeking to recruit graduates.

The ongoing process of decentralization of authority in education (see further in the section on Management and Institutional Development below), which is tending to reduce the role of national control in the system, has the further effect of making it more difficult to develop and effectively implement meaningful national standards of educational achievement. As decentralization, in particular of budgetary provision, takes place, the federal education ministry lacks the means to ensure local observance of nationally determined standards, which in turn can help to ensure equality of access for students throughout the country. It may be that, as greater regional development and diversity emerge, it will be more appropriate to focus on producing regional standards.

Equity

In broad terms, equity and universal access were basic principles of education in the Soviet period. However, access to higher education which has been complicated by the absence of transparent school examinations, which is a major impediment to the provision of equitable educational services. In practice, the enterprise-linked nature of much secondary vocational education did introduce an element of inequality, since enterprises varied significantly in the nature and level of their skill and job needs, with implications for the nature of training provided. Also, given the relative attractions of big cities (access to residence in Moscow was strictly controlled), it is likely that institutions located there had access to better teachers and facilities, as well as linkages to the better post-secondary institutions. Moreover, settlements in remote or climatically extreme areas needed above-average educational facilities as one of the means to attract workers from more congenial environments. Thus there were several factors contributing to inequality of educational provision, but in principle there was equity of access to the facilities available in a given area, with scholarships provided to poorer students to retain them in school.

With recent financial stringency and the trend towards decentralization of authority in education, the practice of providing financial support to poorer students has been declining. Indeed, schools in serious budgetary difficulty may be tempted to give preference to students with wealthier parents, in return for donations or other advantages which help the school to survive. Thus there is a trend to greater inequity of access, which mirrors the greater and more visible inequality of society in Russia during the period of economic transition.

Management and Institutional Development

The post-Soviet period has seen a spasmodic process of decentralization of authority from the federal level to the constituent republics and oblasts, not to mention rayons. The confused federal political situation, with rapid changes of government leadership and a lack of authority over parliament, has meant that decentralization has been piecemeal rather than systematic, with the impact of any measures substantially a function of the power of the political leadership in any local unit. Moreover, different regions of the country vary considerably in terms of their fiscal independence. A minority are net contributors to the federal budget, which puts them in a stronger position to assume additional financial functions, while the majority depend to differing

extents on federal subventions which in practice have been increasingly unreliable. In this situation the latter group are only to a varying but limited extent able to exercise effectively the additional responsibilities entrusted to them.

The previous centralization of management and finance of vocational education at the federal level was in fact not monolithic, but consisted rather of a series of parallel sectoral "empires", as besides the education ministry different federal sectoral ministries held authority over related educational institutions nationwide. This resulted in a lack of coherent vision or institutional coordination, particularly at the local level, contributing to the multiplicity of small and narrowly-focussed training institutions which were job-oriented rather than oriented to the development of broad occupational skills. There has so far been limited progress in rationalizing this structure, with an initial effort to remove training institutions from the purview of sectoral ministries and place them all under the federal education ministry, which in turn has sought to decentralize the operation of PTUs down to the regional level. These are necessary steps, but their effectiveness has been limited, because of the pervasive lack of resources at all governmental levels. Consequently, the ability of the training system to respond to market signals in relation to changes in skill demands remains very restricted in practice.

Some regional authorities have initiated efforts to restructure education, involving their constituent local government units. The latter are supposed to involve employers and other community representatives in efforts to develop new programs and/or institutions, and the closure of those which are obsolete. However, although the degree of independence of the institutions has increased, one problem is that education managers were not prepared to implement these changes nor were arrangements developed to introduce stakeholder participation. There is significant resistance to such efforts, in particular from staff who would be displaced and have little prospect of retraining, and also from conservative elements in the society who seek renovation and resurrection of the pre-existing economic structure, rather than its ongoing adaptation to the changing needs of a market environment. Moreover, there are not the resources available for many significant innovations, either at the institutional or the program level, so progress towards reform is slow, even when there is a will for it.

Federal intentions to devolve management functions to the institutional level appear to have made little progress so far. The relative decline in status and remuneration of what was already under Communism a low-paid "non-material" sector, has meant that there has been little incentive for school staffs to take on additional responsibilities. Instead the accumulation of payment arrears has obliged teachers to find innovative unofficial ways of generating supplementary income for their own subsistence, and those teachers who could use their expertise, e.g. in foreign languages, to find paid employment elsewhere have often done so.

Innovations

In a country as large and diverse as Russia, it is difficult if not impossible to have any comprehensive overview of innovation, but one or two instances may be cited as examples of recent developments. Several major trends of innovation have been noted above, e.g., the consolidation of federal responsibility for education within the education ministry, in association with an effort to decentralize many educational functions to the regional and local government

levels. Federal guidelines have substantially reduced the number of vocational specializations, from some 1,250 to 257 (though recently another 50 have been added, allegedly to cover "modern" vocations), and there is a declared intention to make a further reduction to about 100. The content of instruction is also being revised to make it less job-specific, with emphasis on more versatile skills, and educational standards for 113 of the previously delineated 257 specializations have been approved and implemented. Draft legislation to redefine the content and framework of vocational secondary education includes provision for local and regional elements of the curriculum to make it better adapted to local labor market conditions.

Four regions of the Russian Federation have, from 1997, taken over responsibility for managing the PTU stream of vocational education. This allows the Regional Education Administrations to initiate the structural and financial reforms needed to better serve the interests of students and local employers. Among the innovations being introduced under this measure are increases in student-teacher ratios, introduction of new locally relevant specialization, promotion at the institutional level of revenue generation schemes and a measure of financial independence. A further effort to rationalize the system by merging uneconomic institutions is highly laudable, but faces obstacles from staff made redundant and the limited fungibility of large inefficient buildings and outdated equipment, in a context of great financial stringency.

Bank Support to the Country

In December, 1999, the Bank issued Education in the Regions of Russia study, the purpose of which was to identify key issues in pre-university education (primary and secondary, general and vocational), in order to assist Government efforts to articulate and implement education reform. The findings of the study will provide inputs into future Bank operational work in Russian education.

An Education Innovation Loan (1997) supported a number of initiatives including textbook production and publishing, and creation of a textbook information system that is especially relevant to secondary education. An Education Reform Project is due for Board review in 2001. It will assist the federal education ministry and competitively selected regions to reform general and vocational education to bring about greater efficiency and cost-effectiveness, improved quality standards, greater flexibility and market relevance, and improved equity.

Issues

Over-riding all other issues is that of extreme financial stringency, such that only the most basic expenditures such as salaries and school heating and or meals can be met, and even those are often in serious arrears. This underlies the continuing limited ability to address effectively the following well-known issues, many of which are similar to other ex-communist countries.

- Vocational courses are often over-specialized and linked to jobs for which there may no longer be any demand.
- Many training institutions' enrollments are too small to be economically viable.

- Institutions tend to be "over-capitalized" but obsolete, with large depreciated buildings and outdated equipment.
- Staff training is similarly outdated, and teaching loads are sometimes light, but declines in service conditions and remuneration have destroyed motivation for self-improvement, so many staff are demoralized and resistant to change, seeing it as primarily a threat to the little they do have.
- Institutions lack any independence to initiate locally relevant improvements.
- Potential employers and other stakeholders have little role in the system.
- The changing demographic situation, with falling birth rates, will have a long term effect in Russia as in many other ECA countries.

As noted earlier there have been initiatives at both federal and regional levels to address many of the above issues, and there is clearly awareness of the need for such measures, but the continuing lack of budgetary resources constrains all such efforts.

Annex

Share of Students in Secondary Education in Eastern Europe and Central Asia
(percentage of total)

Country	Education Level	1989	1990	1991	1992	1993	1994	1995	1996	1997
Albania	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	31.1	29.4	49.4	63.0	70.9	78.0	79.4	82.1	84.2
	Vocational/Technical	68.9	70.6	50.6	37.0	29.1	22.0	20.6	17.9	15.8
Armenia	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	53.2	54.2	55.8	57.9	63.1	67.3	72.0	71.7	73.7
	Vocational/Technical	46.8	45.8	44.2	42.1	36.9	32.7	28.0	28.3	26.3
Azerbaijan	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	54.2	56.3	57.4	61.0	63.8	66.8	69.7	72.4	76.0
	Vocational/Technical	45.8	43.7	42.6	39.0	36.2	33.2	30.3	27.6	24.0
Belarus	TOTAL	100	100	100	100	100	100	100	100	-
	General secondary	35.0	35.4	35.4	34.9	34.3	36.0	37.1	39.4	-
	Vocational/Technical	65.0	64.6	64.6	65.1	65.7	64.0	62.9	60.6	-
Bosnia-Herzegovina	TOTAL	-	-	-	-	-	-	-	-	-
	General secondary	-	-	-	-	-	-	-	-	-
	Vocational/Technical	-	-	-	-	-	-	-	-	-
Bulgaria	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	39.5	38.7	38.9	40.5	41.6	42.3	42.7	42.6	41.9
	Vocational/Technical	60.5	61.3	61.1	59.5	58.4	57.7	57.3	57.4	58.1
Croatia	TOTAL	-	-	100	100	100	100	100	100	100
	General secondary	-	-	13.0	18.8	23.6	25.3	24.7	24.6	24.7
	Vocational/Technical	-	-	87.0	81.2	76.4	74.7	75.3	75.4	75.3
Czech Republic	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	17.8	18.9	17.7	17.4	15.8	13.1	13.2	14.5	15.2
	Vocational/Technical	82.2	81.1	82.3	82.6	84.2	86.9	86.8	85.5	84.8
Estonia	TOTAL	-	100	-	100	100	100	100	100	-
	General secondary	64.8	49.0	67.5	50.2	52.4	55.0	54.7	53.5	-
	Vocational/Technical	-	51.0	-	49.8	47.6	45.0	45.3	46.5	-
FYR Macedonia	TOTAL	-	-	-	-	-	-	-	-	100
	General secondary	-	-	-	-	-	-	-	-	31.2
	Vocational/Technical	-	-	-	-	-	-	-	-	68.8
Georgia	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	67.6	70.4	70.6	69.4	62.8	63.3	61.7	64.6	63.5
	Vocational/Technical	32.4	29.6	29.4	30.6	37.2	36.7	38.3	35.4	36.5
Hungary	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	23.9	24.0	24.6	25.6	26.1	26.8	27.0	27.1	27.6
	Vocational/Technical	76.1	76.0	75.4	74.4	73.9	73.2	73.0	72.9	72.4
Kazakhstan	TOTAL	100	100	100	100	100	100	100	100	-
	General secondary	42.9	44.8	45.5	44.6	44.9	45.5	45.9	52.5	-
	Vocational/Technical	57.1	55.2	54.5	55.4	55.1	54.5	54.1	47.5	-
Kyrgyz Republic	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	61.7	62.8	62.8	62.3	61.7	62.0	64.0	67.8	71.0
	Vocational/Technical	38.3	37.2	37.2	37.7	38.3	38.0	36.0	32.2	29.0

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Latvia	TOTAL	100	100	100	100	100	100	100	100	-
	General secondary	32.0	31.4	31.6	33.6	40.4	44.2	47.2	53.1	-
	Vocational/Technical	68.0	68.6	68.4	66.4	59.6	55.8	52.8	46.9	-
Lithuania	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	36.7	38.6	40.5	46.9	46.1	48.7	49.5	52.9	54.2
	Vocational/Technical	63.3	61.4	59.5	53.1	53.9	51.3	50.5	47.1	45.8
Moldova	TOTAL	-	-	100	100	100	100	100	100	-
	General secondary	-	-	38.8	39.3	41.3	43.2	44.6	46.0	-
	Vocational/Technical	-	-	61.2	60.7	58.7	56.8	55.4	54.0	-
Poland	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	22.5	23.4	25.2	26.9	28.1	29.2	30.5	31.1	32.4
	Vocational/Technical	77.5	76.6	74.8	73.1	71.9	70.8	69.5	68.9	67.6
Romania	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	3.5	12.8	21.6	26.5	29.0	29.4	29.0	30.0	30.4
	Vocational/Technical	96.5	87.2	78.4	73.5	71.0	70.6	71.0	70.0	69.6
Russian Federation	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	31.3	33.0	32.8	33.1	33.9	36.2	37.1	38.3	39.8
	Vocational/Technical	68.7	67.0	67.2	66.9	66.1	63.8	62.9	61.7	60.2
Slovak Republic	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	18.1	19.2	20.1	20.9	21.7	22.4	23.2	24.1	25.0
	Vocational/Technical	81.9	80.8	79.9	79.1	78.3	77.6	76.8	75.9	75.0
Slovenia	TOTAL	-	-	-	-	100	100	100	100	-
	General secondary	-	-	-	-	24.3	24.4	24.4	24.8	-
	Vocational/Technical	-	-	-	-	75.7	75.6	75.6	75.2	-
Tajikistan	TOTAL	100	100	-	100	-	-	100	-	-
	General secondary	67.3	76.7	80.4	64.8	76.0	77.0	65.6	-	-
	Vocational/Technical	32.7	23.3	-	35.2	-	-	34.4	-	-
Turkmenistan	TOTAL	100	100	100	100	100	100	100	100	100
	General secondary	62.5	63.9	62.9	62.6	64.9	70.7	76.1	69.4	77.1
	Vocational/Technical	37.5	36.1	37.1	37.4	35.1	29.3	23.9	30.6	22.9
Ukraine	TOTAL	-	-	100	100	100	100	100	100	100
	General secondary	-	-	38.3	37.5	37.6	39.9	41.6	43.9	47.6
	Vocational/Technical	-	-	61.7	62.5	62.4	60.1	58.4	56.1	52.4
Uzbekistan	TOTAL	100	100	100	100	100	-	-	-	-
	General secondary	53.7	56.2	56.8	53.7	51.4	-	-	-	-
	Vocational/Technical	46.3	43.8	43.2	46.3	48.6	-	-	-	-
Yugoslav Republic	TOTAL	-	100	100	100	100	100	100	100	-
	General secondary	-	27.1	35.1	44.3	55.4	56.2	53.7	55.7	-
	Vocational/Technical	-	72.9	64.9	55.7	44.6	43.8	46.3	44.3	-

— Not available

Notes Definition of title - percentage of students enrolled by type of upper secondary education in the total number enrolled in upper secondary education

Sources: World Bank staff estimates based on data supplied by UNICEF ICDC

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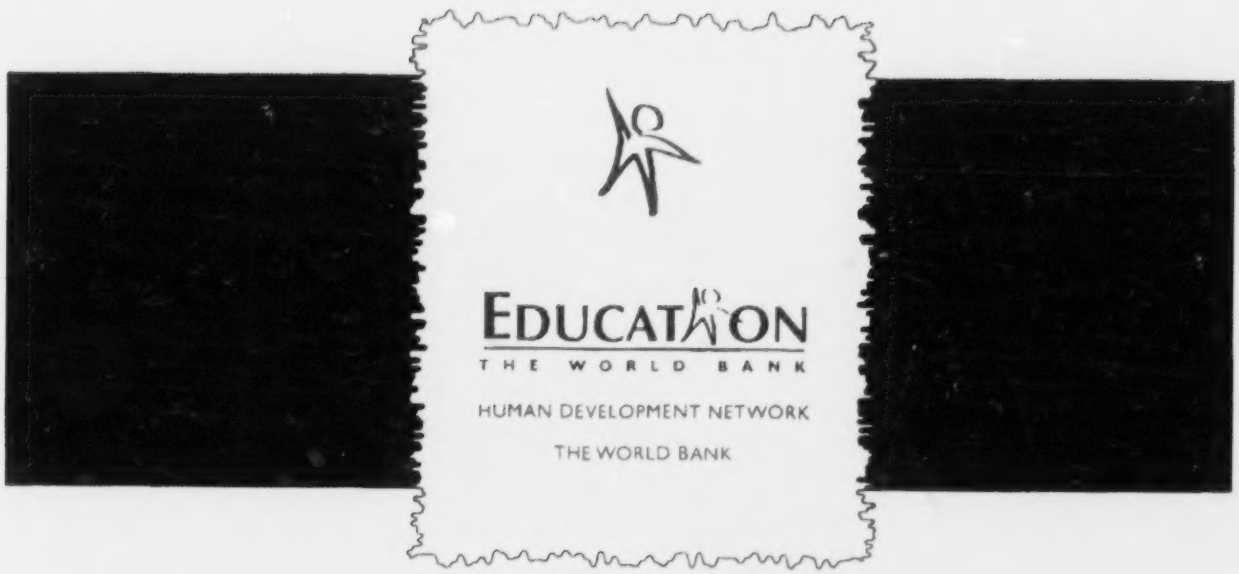

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